

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (Currently Amended) A method of changing values of a range of consecutive keys in an original B-tree having a plurality of keys stored therein, comprising:
excising the range of consecutive keys from the original B-tree, the original B-tree representing a file system, wherein renaming an element of the file system requires the changing of the values of the range of consecutive keys, the excision of the range of consecutive keys converting the original B-tree into a trimmed tree;
storing the range of consecutive keys excised ~~form~~from the B-tree to form an extracted tree;
changing the values of the keys of the extracted tree to form a modified extracted tree;
and
inserting the modified extracted tree into the trimmed tree to form a final B-tree.
2. (Original) A method as in claim 1, wherein the original B-tree represents a hierarchical namespace.
3. (Original) A method as in claim 2, wherein the original B-tree represents a hierarchical namespace of a file system, and the range of consecutive keys belong to a directory of the file system, and wherein the changing of the values of the range of consecutive keys is in connection with the directory being renamed.
4. (Original) A method as in claim 3, wherein each key in the original B-tree contains a pathname for a file or directory of the file system prior to the renaming of the directory.

5. (Original) A method as in claim 1, including the step of balancing the trimmed tree prior to the step of inserting.

6. (Original) A method as in claim 1, wherein the step of inserting includes balancing the final B-tree.

7. (Original) A method as in claim 1, wherein the step of changing includes changing a prefix field of a root node of the extracted tree.

8. (Original) A method as in claim 1, wherein the step of inserting the modified extracted tree into the trimmed tree involves a strict insertion.

9. (Currently Amended) A computer-readable medium having computer-executable instructions for performing steps for changing values of a range of consecutive keys in an original B-tree having a plurality of keys stored therein, comprising:

excising the range of consecutive keys from the original B-tree, the original B-tree representing a file system, wherein renaming an element of the file system requires the changing of the values of the range of consecutive keys, the excision of the range of consecutive keys converting the original B-tree into a trimmed tree;

storing the range of consecutive keys excised form the B-tree to form an extracted tree;

changing the values of the keys of the extracted tree to form a modified extracted tree; and

inserting the modified extracted tree into the trimmed tree to form a final B-tree.

10. (Original) A computer-readable medium as in claim 9, wherein the original B-tree represents a hierarchical namespace.

11. (Original) A computer-readable medium as in claim 10, wherein the original B-tree represents a hierarchical namespace of a file system, and the range of consecutive keys belong to a directory of the file system, and wherein the changing of the values of the range of consecutive keys is in connection with the directory being renamed.

12. (Original) A computer-readable medium as in claim 11, wherein each key in the original B-tree contains a pathname for a file or directory of the file system prior to the renaming of the directory.

13. (Original) A computer-readable medium as in claim 9, having further computer-executable instructions for performing the step of balancing the trimmed tree and extracted tree prior to the step of inserting.

14. (Original) A computer-readable medium as in claim 9, wherein the step of inserting includes balancing the final B-tree.

15. (Original) A computer-readable medium as in claim 9, wherein the step of changing includes changing a prefix field of a root node of the extracted tree.

16. (Original) A computer-readable medium as in claim 9, wherein the step of inserting the modified extracted tree into the trimmed tree involves a strict insertion.

17. (Currently Amended) A method of modifying a B-tree, wherein the B-tree represents a file system, wherein renaming an element of the file system requires the changing of the values of the range of consecutive keys, the method representing a file system in connection with renaming a directory in the file system, comprising:

excising keys of the directory being renamed from the B-tree, the excision of the keys of the directory converting the B-tree into a trimmed tree;

storing the keys of the directory excised from the B-tree in an extracted tree;

changing the values of the keys of the extracted tree to reflect a new name of the directory; and

inserting the extracted tree with changed values of the keys into the trimmed tree to form a final B-tree.

18. (Original) A method as in claim 17, wherein each key in the B-tree contains a pathname for a file or directory of the file system.

19. (Original) A method as in claim 17, including the step of balancing the trimmed tree prior to the step of inserting.

20. (Original) A method as in claim 17, wherein the step of inserting includes balancing the final B-tree.

21. (Original) A method as in claim 17, wherein the step of changing the values of the keys of the extracted tree includes changing a prefix field of a root node of the extracted tree.

22. (Currently Amended) A computer-readable medium having computer-executable instructions for performing steps for modifying a B-tree, wherein the B-tree represents a file system, wherein renaming an element of the file system requires changing values of a range of consecutive keys in the B-tree representing a file system connection with renaming a directory in the file system, comprising:

excising keys of the directory being renamed from the B-tree, the excision of the keys of the directory converting the B-tree into a trimmed tree;

storing the keys of the directory excised from the B-tree in an extracted tree;

changing the values of the keys of the extracted tree to reflect a new name of the directory; and

inserting the extracted tree with changed values of the keys into the trimmed tree to form a final B-tree.

23. (Original) A computer-readable medium as in claim 22, wherein each key in the B-tree contains a pathname for a file or directory of the file system.

24. (Original) A computer-readable medium as in claim 22, having computer-executable instructions for performing the step of balancing the trimmed tree and extracted tree prior to the step of inserting.

25. (Original) A computer-readable medium as in claim 22, wherein the step of inserting includes balancing the final B-tree.

26. (Original) A computer-readable medium as in claim 22, wherein the step of changing the values of the keys of the extracted tree includes changing a prefix field of a root node of the extracted tree.